Mr. Ted Holland
ET and T Frames, Inc.
P.O. Box 1914
Elkhart, IN 46517

Re: **039-11051**
First Significant Source Modification to
Part 70 No.: T039-11051-00170

Dear Mr.Holland:

ET and T Frames, Inc. was issued a permit on February 18, 1999 for a custom welding and finishing of RV and trailer frames operation. A letter requesting changes to this permit was received on June 8, 1999. Pursuant to the provisions of 326 IAC 2-7-12 a Significant Source modification to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of the construction of the following emission units:

(a) one (1) powder coating booth, identified as Powder booth 1, using a dust collector which collects and recycles the coating powder and is considered to be an integral part of the process, and exhausting fugitively within the building; and
(b) two (2) aluminum oxide pneumatic blasting guns, identified as Blastguns 1 and 2, with a maximum capacity of 20 frames per hour, using a dust collector (ID SM-1) as particulate control, and exhausting fugitively within the building.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).

2. This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

Operation of the equipment listed in this significant source modification cannot commence until the Administrative Amendment No. 067-11373-00170, which will incorporate these limitations into the Part 70 operating permit, has been issued.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter contact Phillip Ritz, c/o OAM, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham or extension (3-6878), or dial (973) 575-2555, extension 3241.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
PR/EVP
cc: File - Elkhart County
U.S. EPA, Region V
Elkhart County Health Department
Air Compliance Section Inspector - Doug Elliot
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Nancy Landau

PART 70 OPERATING PERMIT
OFFICE OF AIR MANAGEMENT

ET and T Frames, Inc.
28816 Ventura Drive
Elkhart, Indiana 46517

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 and 326 IAC 2-1-3.2 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T039-7470-00170	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Management	Issuance Date: February 19, 1999

First Significant Source Modification: 039-11051	Pages Affected: 3, 3a, 4, 4a, 29a, 29b, 29c
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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Emergency/Deviation Occurrence Report
Semi-Annual Compliance Monitoring Report Form

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary custom welding and finishing of RV and trailer frames operation.

Responsible Official:	Ted Holland
Source Address:	28816 Ventura Drive, Elkhart, Indiana 46517
Mailing Address:	P.O. Box 1914, Elkhart, Indiana 46515
SIC Code:	3499
County Location:	Elkhart
County Status:	Maintenance Area for Ozone, Attainment for all other criteria pollutants
Source Status:	Part 70 Permit Program Minor Source, under PSD Rules; Major Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

(1) One (1) spray booth, identified as EU-15, with maximum capacity of 8.88 metal frames per hour, using dry filters as control, exhausting to two (2) stacks (SV-15 and SV-16);

(2) one (1) powder coating booth, identified as Powder booth 1, using a dust collector which collects and recycles the coating powder and is considered to be an integral part of the process, and exhausting fugitively within the building; and

(3) two (2) aluminum oxide pneumatic blasting guns, identified as Blastguns 1 and 2, with a maximum capacity of 20 frames per hour, using a dust collector (ID SM-1) as particulate control, and exhausting fugitively within the building.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(1) Twenty-eight (28) Lincoln 500 arc welders, identified as FUG 22 - FUG 27, FUG 30 - FUG 35, FUG 41 - FUG 44, FUG 48 - FUG 51, FUG 60 - FUG 61, FUG 66 - FUG 67, FUG 70 - FUG 71, and FUG 77 - FUG 78;

(2) Twenty-three (23) Miller CP-300 MIG welders, identified as FUG 28 - FUG 29, FUG 36 - FUG 39, FUG 45 - FUG 46, FUG 52 - FUG 55, FUG 57 - FUG 59, FUG 63 - FUG 65, and FUG 72 - FUG 76;

(3) Two (2) AIRCO 400 arc welders, identified as FUG 68 and FUG 69;

(4) Four (4) plasma cutters, identified as FUG 40, FUG 47, FUG 56, and FUG 62;

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:
(a) one (1) powder coating booth, identified as Powder booth 1, using a dust collector which collects and recycles the coating powder and is considered to be an integral part of the process, and exhausting fugitively within the building; and
(b) two (2) aluminum oxide pneumatic blasting guns, identified as Blastguns 1 and 2, with a maximum capacity of 20 frames per hour, using a dust collector (ID SM-1) as particulate control, and exhausting fugitively within the building.
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

(a) The powder coating booth shall comply with 326 IAC 6-3-2(c) using the following equation:

$E = 4.10 P^{0.67}$ where: E = rate of emission in pounds per hour,
P = process weight in tons per hour.

(b) The particulate matter (PM) from the two (2) aluminum oxide pneumatic blasting guns shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

D.3.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their associated control devices.

Compliance Determination Requirements

D.3.3 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.3.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.4 Particulate Matter (PM)

(a) The cartridge dust collectors for particulate matter overspray control shall be in operation at all times when the powder coating booth is in operation.

(b) The dust collectors for PM control shall be in operation at all times when the two (2) aluminum oxide pneumatic blasting guns are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.5 Parametric Monitoring

The Permittee shall record the total static pressure drop across the dust collectors used in conjunction with the two (2) aluminum oxide pneumatic blasting guns, at least once daily when the two (2) aluminum oxide pneumatic blasting guns are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the dust collectors shall be maintained within the range of 1 and 1.9 inches of water or a range established during the latest stack test or recommended by manufacturer. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM and shall be calibrated at least once every six (6) months.

D.3.6 Dust Collector Inspections

An inspection shall be performed each calender quarter of all bags controlling the two (2) aluminum oxide pneumatic blasting guns when venting to the atmosphere. A dust collector inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.3.7 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For single compartment dust collectors, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.8 Record Keeping Requirements

(a) To document compliance with Condition D.3.5, the Permittee shall maintain the following:

(1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:

(A) Inlet and outlet differential static pressure; and

(B) Cleaning cycle: frequency and differential pressure.

(2) Documentation of all response steps implemented, per event .

(3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.

(4) Quality Assurance/Quality Control (QA/QC) procedures.

(5) Operator standard operating procedures (SOP).

(6) Manufacturer's specifications or its equivalent.

(7) Equipment "troubleshooting" contingency plan.

(8) Documentation of the dates vents are redirected.

(b) To document compliance with Condition D.3.6, the Permittee shall maintain records of the results of the inspections required under Condition D.3.6 and the dates the vents are redirected.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a Part 70 Significant Source Modification

Source Background and Description

Source Name: ET and T Frames, Inc.
Source Location: 28816 Ventura Drive, Elkhart, Indiana 46517
County: Elkhart
SIC Code: 3499
Operation Permit No.: T039-7470-00170
Operation Permit Issuance Date: February 18, 1999
Source Modification No.: T039-11051-00170
Permit Reviewer: Phillip Ritz/EVP

The Office of Air Management (OAM) has reviewed a modification application from ET and T Frames, Inc. relating to the construction of the following emission units and pollution control devices:

(a) one (1) powder coating booth, identified as Powder booth 1, using a dust collector which collects and recycles the coating powder and is considered to be an integral part of the process, and exhausting fugitively within the building; and
(b) two (2) aluminum oxide pneumatic blasting guns, identified as Blastguns 1 and 2, with a maximum capacity of 20 frames per hour, using a dust collector (ID SM-1) as particulate control, and exhausting fugitively within the building.

Insignificant Activities

The modification also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:

History

On June 8, 1999, ET and T Frames, Inc. submitted an application to the OAM requesting to add the modification to their existing plant. ET and T Frames, Inc. was issued a Part 70 permit on February 18, 1999.

Source Definition

This custom welding and finishing of RV and trailer frames operation consists of two (2) plants:

(a) Plant 1 is located at 28816 Ventura Drive, Elkhart, Indiana 46517; and

(b) Plant 2 is located at 58391 Ventura Drive, Elkhart, Indiana 46517.

Since the two (2) plants are located in contiguous properties, have the same SIC codes and are owned by one (1) company, they are considered one (1) source.

Air Pollution Control Justification as an Integral Part of the Process

The company has submitted the following justifications such that the dust collection system be considered as an integral part of the powder coating process:

(a) The dust collector and powder coating guns will be interconnected to prevent operation of guns without the collection system. This is sometimes referred to as a lock out system.

(b) 100% of the powder collected in these filters is recycled back into the powder reservoir for future surface coating. Without the filters, the economic loss of powder would be great.

(c) Installation of the control equipment will have the following economic impact:
20 frames per hour, with 1.33 lbs. of powder material sprayed per frame = 26.6 lbs/hr
26.6 lbs/hr x 33 % overspray loss = 8.778 lbs/hr loss
8.778 x 8,760 hours = 76,895.0 lbs/yr x $2.50 lb = $192,237.00 year savings by using control equipment

The positive new economic effect of this control equipment must be considered to put ET and T Frames on the same level as their competitors. It should also be noted that plant one will decrease it's use of solvent based paint by approximately 80% when this powder system is in full operation.

The OAM has evaluated the justifications and agreed that the dust collector will be considered as an integral part of the powder coating process. Therefore, the permitting level will be determined using the potential emissions after the dust collector. Operating conditions will be specified in the proposed permit that this dust collector shall operate at all times when the powder coating process is in operation.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
Dry-1	Oven	30.0	1.3	1,542	77
Tube-1 through Tube-7	Seven (7) Infrared tube heaters	20.0	0.5	100 (est.)	77

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on June 8, 1999.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 4.)

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	72.16
PM-10	72.16
SO_2	0.01
VOC	0.09
CO	1.42
NO_x	1.69

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(g), as this modification has the potential to emit greater than or equal to twenty -five tons of particulate matter or particulate matter with an aerodynamic diameter less than or equal to ten (1) micrometers (PM10).

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	maintenance attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as maintenance attainment for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Elkhart County has been classified as attainment or unclassifiable for all other criteria

pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	greater than 100, less than 250
PM-10	greater than 100, less than 250
SO_2	less than 100
VOC	less than 100
CO	less than 100
NOx	less than 100

(a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.

(b) These emissions are based upon the Title V Operation Permit (T039-7470-00170), issued on February 18, 1999.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
Abrasive Blasting (Blastguns 1 and 2)	0.01	0.01	0.00	0.00	0.00	0.00	0.00
Powder Coating Booth 1	0.82	0.82	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion	0.13	0.13	0.01	0.09	1.42	1.69	0.00
Total Emissions	0.95	0.95	0.01	0.09	1.42	1.69	0.00

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this proposed modification.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

That pursuant to 326 IAC 6-3-2:

(a) The cartridge dust collectors for particulate matter overspray control shall be in operation at all times when the powder coating booth is in operation.

(b) The surface coating operation shall comply with 326 IAC 6-3-2(c) using the following equation:

$E = 4.10 P^{0.67}$ where: E = rate of emission in pounds per hour,
P = process weight in tons per hour.

(c) The particulate matter (PM) from the two (2) aluminum oxide pneumatic blasting guns shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dust collector shall be in operation at all times the two (2) aluminum oxide pneumatic blasting guns is in operation, in order to comply with this limit.

No 326 IAC 8 rules apply to this modification.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

(1) The two (2) aluminum oxide pneumatic blasting guns have applicable compliance monitoring conditions as specified below:

(a) The Permittee shall record the total static pressure drop across the dust

collectors used in conjunction with the two (2) aluminum oxide pneumatic blasting guns, at least once daily when the two (2) aluminum oxide pneumatic blasting guns are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the dust collectors shall be maintained within the range of 1 and 1.9 inches of water or a range established during the latest stack test or recommended by manufacturer. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM and shall be calibrated at least once every six (6) months.

(b) An inspection shall be performed each calender quarter of all bags controlling the two (2) aluminum oxide pneumatic blasting guns when venting to the atmosphere. A dust collector inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

(c) In the event that bag failure has been observed the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). For single compartment dust collectors, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions are necessary because the dust collector for the two (2) aluminum oxide pneumatic blasting guns must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-7 (Part 70).

Changes Proposed

The following changes have been made to the Part 70 Operating Permit (T 039-7470-00170) :

(a) Condition A.2, Page 4 of 33

Add to the listing of emission units the following:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

(1) One (1) spray booth, identified as EU-15, with maximum capacity of 8.88 metal frames per hour, using dry filters as control, exhausting to two (2) stacks (SV-15 and SV-16)**;**

(2) one (1) powder coating booth, identified as Powder booth 1, using a dust collector as an integral part of the process for particulate control, and exhausting fugitively within the building; and

(3) two (2) aluminum oxide pneumatic blasting guns, identified as Blastguns 1 and 2, with a maximum capacity of 20 frames per hour, using a dust collector as particulate control, and exhausting fugitively within the building.

(b) Section D.3, Pages 29a, 29b, and 29c, was added to the existing Title V (T 039-7470-00170) permit.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 039-11051-00170.

Appendix A: Emission Calculations

Company Name: ET and T Frames, Inc. Plant #2
Address City IN Zip: 58391 Ventura, Elkhart, IN 46517 (Adjacent to ET and T Plant #1)
Source Mod: 039-11051-00170
Reviewer: PR/EVP
Date: June 8, 1999

Uncontrolled Potential Emissions (tons/year)

	Emissions Generating Activity			
Pollutant	Natural Gas Combustion	Powder Coating Booth	Abrasive Blasting	**TOTAL**
PM	0.13	0.82	71.21	72.16
PM10	0.13	0.82	71.21	72.16
SO2	0.01	0.00	0.00	0.01
NOx	1.69	0.00	0.00	1.69
VOC	0.09	0.00	0.00	0.09
CO	1.42	0.00	0.00	1.42
total HAPs	0.00	0.00	0.00	0.00
worst case single HAP	0.00	0.00	0.00	0.00

Total emissions based on rated capacity at 8,760 hours/year.

Controlled Potential Emissions (tons/year)

	Emissions Generating Activity			
Pollutant	Natural Gas Combustion	Powder Coating Booth	Abrasive Blasting	**TOTAL**
PM	0.13	0.82	0.01	0.95
PM10	0.13	0.82	0.01	0.95
SO2	0.01	0.00	0.00	0.01
NOx	1.69	0.00	0.00	1.69
VOC	0.09	0.00	0.00	0.09
CO	1.42	0.00	0.00	1.42
total HAPs	0.00	0.00	0.00	0.00
worst case single HAP	0.00	0.00	0.00	0.00

Total emissions based on rated capacity at 8,760 hours/year, after control.

Appendix A: Emission Calculations
Abrasive Blasting - Confined

Company Nan ET and T Frames, Inc. Plant #2
Address City I 58391 Ventura, Elkhart, IN 46517 (Adjacent to ET and T Plant #1)
Source Mod: 039-11051-00170
Reviewer: PR/EVP
Date: June 8, 1999

Table 1 - Emission Factors for Abrasives

	Emission Factor	
Abrasive	lb PM / lb abrasiv	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3
Al oxides	160
Sand	99
Steel	487

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Diameter

	Nozzle Pressure (psig)							
Internal diameter, i	30	40	50	60	70	80	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	149	165
1/4	109	138	168	195	221	255	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	940
1/2	503	615	725	835	945	1050	1160	1265
5/8	820	990	1170	1336	1510	1680	1850	2030
3/4	1140	1420	1670	1915	2160	2400	2630	2880
1	2030	2460	2900	3340	3780	4200	4640	5060

Calculations

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)	
FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =	503
D = Density of abrasive (lb/ft3) From Table 2 =	160
D1 = Density of sand (lb/ft3) =	99
ID = Actual nozzle internal diameter (in) =	0.5
ID1 = Nozzle internal diameter (in) from Table 3 =	0.5

Flow Rate (FR) (lb/hr) = 812.929 per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =	0.010
FR = Flow Rate (lb/hr) =	812.929
w = fraction of time of wet blasting =	0 %
N = number of nozzles =	2

Uncontrolled Emissions =	**16.26 lb/hr**
	71.21 ton/yr

Controlled Emissions (C, lb/hr) for PM

CE = control efficiency = 99.99%

Controlled PM Emissions	**0.002 lb/hr**
	0.007 ton/yr

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)
Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lbs
Flow Rate (FR) (lb/hr) = FR1 x (ID/ID1)2 x (D/D1)
E = EF x FR x (1-w/200) x N
C = E x (1-CE)
w should be entered in as a whole number (if w is 50%, enter 50)

Appendix A: Process Particulate Emissions

Company Name: ET and T Frames, Inc. Plant #2
Address City IN Z 58391 Ventura, Elkhart, IN 46517 (Adjacent to ET and T Plant #1)
Source Mod: 039-11051-00170
Reviewer: PR/EVP
Date: June 8, 1999

Powder Paint Booth

Transfer Efficiency			**50.00%**
Filter Efficiency			**99.90%**
Booth Capacity	**19.84**	**lbs/hr of powder**	

Potential PM Emissions

= (19.84 lbs powder per hour) x (1-.50 transfer efficiency) x (1-.999 filter efficiency) = 0.0
= 0.0099 lbs PM/hr x 1 ton/2000 lbs x 8760 hrs/yr = 0.043 tons PM per year.

Allowable PM Emissions determined from 326 IAC 6-3 (Process Operations)

= 4.10 x P^0.67 where P = Proces P = 18.84 lbs powder/hr x 1 ton/2000 lbs = 0.0099 ton
= 4.10 x 0.0099^0.67
= 0.186 lbs/hr
= 4.47 lbs/day
= 0.816 tons/yr

The potential controlled PM emission rate (0.0099 lbs/hr) is less than the allowable PM emission rate (0.186 lbs/hr) in compliance
There is a 50% transfer efficiency to the parts, while 50% of the powder is recycled back into the coating system.

Appendix A: Emission Calculations
Natural Gas Combustion
MM Btu/hr 0.3 - < 100

Company Nai ET and T Frames, Inc. Plant #2
Address City 58391 Ventura, Elkhart, IN 46517 (Adjacent to ET and T Plant #1)
Source Mod: 039-11051-00170
Reviewer: PR/EVP
Date: June 8, 1999

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
3.9	33.7

One (1) drying oven, identified as Dry-1, with a rated heat input of 2.8 mmBtu per hour
Seven (7) infrared tube heaters, identified as Tube-1 through Tube-7, with a maximum heat input of 0.15 mmBtu per hour (1.05 mmBtu total)

Polluta						
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.13	0.13	0.01	1.69	0.09	1.42

Methodology:
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors for NOx: uncontrolled = 100, Low Nox Burner = 50, Flue gas recirculation = 32
All PM is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors may be used to estimate PM10, PM2.5, and PM1 emissions.
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1 and 1.4-2, SCC #1-01-006-02, #1-02-006-02, #1-03-006-02, #1-03-006-03

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Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton